NOTES

1. Papers selected for inclusion in General Sessions will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

2. Papers selected for inclusion in Specialized Sessions will be available at the Conference in only one of the above official languages.

3. Summaries of all papers, as submitted by contributors, will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

4. Papers and summaries will not be available for general distribution in advance of the Conference. They will be published in advance in limited quantities only for the use of delegations of participating governments and of other authorized participants. Post-Conference publication and general distribution of the Conference Proceedings will follow United Nations practices as laid down by the United Nations Publications Board.

NEW ECONOMICAL METHODS IN THE CONSTRUCTION OF OIL INDUSTRY INSTALLATIONS

The underdeveloped countries must travel in a short period of time the path of economic progress on which the states with a high standard of living have spent a hundred or more years. Therefore, the experience of the Soviet Union that has solved a similar problem in a short time might be of interest.

Rapid economic progress requires the use of the most efficient methods of industrial production permitting the country to reach the goal with the minimum expenditure of money and labour. In the industrialization of the USSR the use of welding processes has played a major part. Some examples are given of radical improvement, based on the use of welding, in the methods of the construction of oil industry installations. This industry providing low cost fuel and raw materials for the chemical industry lays the foundation of a country's prosperity.

The oil industry requires a great number of tanks for storing oil and its derivatives. Throughout the world tanks are fabricated from separate steel plates at the place of their installation. With this method the welding has to be done under the open sky on the construction site. In the USSR the problem of fabrication of steel tanks has been solved by making them at a factory in the form of large flat sheets which are wound into coils for transportation. For example, the shell of a tank of 5000 cu.m capacity was formerly shipped to the construction site as 72 separate plates, but now it is made, at a lower cost, at a factory in the form of a single flat sheet wound into a coil with an outside diameter of 2.8 m. In spite of the large size of this sheet having an area of 900 sq.m, it is convenient to transport it as a coil.

At a factory all welding involved in the fabrication of sheets is mechanized and based on the use of simple equipment which reduces the volume of work at the construction site several times. Tanks are now erected five times as fast as before, and their cost has been reduced by 30 per cent. The success of the new method is due also to the fact that tanks fabricated in this way have thinner walls than those built by the usual methods. This results in saving of metal so much needed in the industrialization of underdeveloped countries.

The construction of tanks from coils does not require any powerful cranes and is done by means of very simple equipment. This has contributed to the export of coiled tanks from the Soviet Union to other countries such as Afghanistan, the German Democratic Republic, Yemen, Cuba, Finland and others. It can be expected that some of the new states will also organize their own manufacture of such pre-fabricated tanks.

Apart from tanks, the oil industry requires the construction of a great number of pipe lines which also involves a great expenditure of metal and skilled labour in joining together ordinary short pipes. In order to greatly speed up and lower the cost of laying pipe lines, a new solution to this technical problem has been suggested and realized in the USSR which enables the factories to turn out steel pipes 300 to 350 m each in length instead of 8 or 10 m. This problem has been solved by making pipes in the form of flat hollow strips which can be wound into a coil of 1.8 - 2.0 m in diameter. Owing to the fortyfold increase in the length of pipes, the work of joining pipes in oil fields has been reduced accordingly.

In the USSR there are similar improvements in the construction of other oil industry installations as well.

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